

REMARKS

The amendment of claim 9 to recite that wastewater contains mineral impurities is for the purpose of providing an antecedent basis for step (b) of the claim and is supported throughout the specification; the insertion into claim 9 that the wastewater has a COD “exceeding he environmental limit standard value” is supported, for example, on page 2, lines 14-16 of the specification; and the insertion into claim 9 that the four recited steps are “carried out in the indicated order” is supported, for example by Figures 1 and 2 and the explanation of these figures on pages 5-8 of the specification.

Reconsideration of this application, as amended, is respectfully requested.

Claim 9-14 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Todo et al. (Todo), Japanese application No. 08-046433, in view of Obinata et al. (Obinata), U.S. Patent 5,613,239.

Todo is relied on as teaching a treatment of a waste liquid in a secondary system containing ethanolamine (ETA), hydrochloric acid, and chlorine ions but no radionuclides (radioactive atoms) (see par. [0004]), wherein the waste liquid is introduced into an electrolyzer, an acidic or alkaline liquid is injected to control the pH within a range of 5-9, and electrolysis is performed to oxidize and decompose the waste liquid from a COD value of 6000 ppm to that of no higher than 20 ppm. However, as stated in the Office Action, Todo does not disclose that a rise in pH

by the addition of an alkaline substance would produce precipitants which are removed by filtration as required in the method of the present claims.

The Office Action takes the position that the failure of Todo to disclose or suggest the precipitation and separation by filtration of dissolved metals from an ETA-containing waste liquid is overcome by Obinata, which teaches a method of decomposing an organic solution containing radioactive metal ions by applying a chelating solution, adding an alkaline agent to increase the electrical conductivity of the solution, subjecting the solution to electrolysis to convert the metal ions to hydroxides of low solubility, and separating the hydroxides by filtration. This position of the Office Action is based on the conclusion that it would be obvious for a person having ordinary skill in the art to incorporate the filtration of hydroxides disclosed as part of the method of Obinata, into the method of Todo and thus obtain the claimed method of the present invention.

In response to the rejections as expressed in the Office Action, it is submitted that a person skilled in the art would not tend to combine the teachings of the references as described in view of the substantial differences between the processes disclosed in the references. Among these differences are as follows: 1) the purpose of the process of Todo is to treat an ethanolamine (ETA) containing waste liquid, which is free of radioactive metals, to reduce the chemical oxygen demand (COD) of the liquid to an environmentally acceptable discharge level,

while the purpose of the Obinata process is to separate and collect radioactive metals present in a waste stream of an atomic power plant; 2) the ETA of the Todo process functions as a rust or corrosion inhibitor, while the chelating agents of Obinata, e.g., ethylenediamine tetraacetic acid (EDTA) and others disclosed by Obinata at col. 3, lines 38-41, are different from the ETA of Todo, and function as a solubilizer of radioactive metal ions; 3) the alkaline material of Todo is for the purpose of controlling the pH of the liquid being treated within the range of 5-9 to facilitate subsequent electrolysis while the function of sodium hydroxide in the Obinata method is to elevate the electrical conductivity of the radioactive metal solution; and (4) the function of electrolysis in the Todo process is to oxidize and decompose the ETA and other nitrogen compounds which may be present to a COD concentration of no higher than 20 ppm, while the function of electrolysis in the Obinata process is to form insoluble hydroxides which are then separated by filtration.

In view of the divergent characteristics and functions of the various agents utilized and the steps making up the Todo and Obinata methods as described above, it is reiterated that the combination of the teachings of the two references would not render obvious under 35 U.S.C. 103(a) the claimed method to a person having ordinary skill in the art.

This application is now thought to be in condition for allowance and such action at an early date is earnestly solicited.

Applicant respectfully requests a one month extension of time for responding to the Office Action. The fee of \$60.00 for the extension is provided for in the charge authorization presented in the PTO Form 2038, Credit Card Payment form, provided herewith.

If there is any discrepancy between the fee(s) due and the fee payment authorized in the Credit Card Payment Form PTO-2038 or the Form PTO-2038 is missing or fee payment via the Form PTO-2038 cannot be processed, the USPTO is hereby authorized to charge any fee(s) or fee(s) deficiency or credit any excess payment to Deposit Account No. 10-1250.

Respectfully submitted,

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